REMARKS

I.   Request for Information

In response to the Examiner's Request for Information, Applicant has filed

herewith a Supplemental Information Disclosure Statement including translations of

non-English documents and other related documents as requested by the Examiner.

II.   Amendments to the Specification

By this amendment, Applicant has included a brief discussion of figures 3-8, as

requested by the Examiner. See Office Action, page 2.

III.   Amendments to the Claims

By this amendment, Applicant has amended claims 1, 5, and 8-11. Support for

the amendments to claims 8 and 11 ("a preconfigured purpose") may be found at least

on page 15, lines 11-14, of the specification. Support for the amendments to claim 11

("degree of validity") may be found at least on page 18, lines 29-33, of the specification.

Additional amendments were made to claims 1, 5, and 8-11 to further improve form and

grammar and do not limit the scope of the claims.

Claims 1-13 are currently pending. Of these, claims 1, 10, and 11 are

independent.

IV.   Arguments

A.   Claim Rejections - 35 U.S.C. § 112

Claims 8, 10, and 11 stand rejected under 35 U.S.C. § 112, second paragraph,

as being indefinite. By this amendment, Applicant has amended the claims to address

the Examiner's concerns with relative and indefinite terms. See Office Action, page 3.

Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection

under 35 U.S.C. § 112.

B. Claim Rejections - 35 U.S.C. § 103(a)

Claims 1-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over

Study of Associative Memory Analog Neural Network LSI with Learning Function

("SAMANN") in view of Chaos and Associative Memory ("CAM").[1]

To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), each

of three requirements must be met. First, the references, taken alone or in combination,

must teach or suggest each and every element recited in the claims. See M.P.E.P.

§ 2143.03 (8th ed. 2001). Second, there must be some suggestion or motivation, either

in the references themselves or in the knowledge generally available to one of ordinary

skill in the art, to combine the references in a manner resulting in the claimed invention.

Third, a reasonable expectation of success must exist. Moreover, each of these

requirements must "be found in the prior art, and not be based on applicant's

disclosure." M.P.E.P. § 2143 (8th ed. 2001).

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[1] The Office Action sets forth many characterizations of the cited references. Applicant discusses selected ones of these characterizations in this Reply. However, the lack of discussion does not indicate that Applicant agrees with the characterizations set forth in the Office Action.

1. Claims 1-9

The Office Action has failed to establish a *prima facie* case of obviousness for at least the reason that <u>SAMANN</u> fails to teach or suggest each and every element of claim 1.

<u>SAMANN</u> fails to teach or suggest at least the following elements of claim 1: "a plurality of associative data memories capable of temporarily holding input or output data of said associative memory; and a value judgment device receiving part of the data held in said plurality of associative data memories."

The Office Action describes the elements listed in claim 1 as a Markush group and refers to a passage in <u>SAMANN</u> as disclosing "one example of prior art referenced to one of the cited group." See Office Action, page 4. However, claim 1 does not recite a Markush group and has been amended to address the Office Action's contrary interpretation.

Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claim 1 under 35 U.S.C. § 103(a). Claims 2-9 depend from and add additional features to independent claim 1. Accordingly, these claims are allowable for at least the reasons set forth above.

2. Claim 10

The Office Action has failed to establish a *prima facie* case of obviousness for at least the reason that <u>SAMANN</u> and <u>CAM</u> fail to teach or suggest each and every element of claim 10.

The Office Action describes <u>CAM</u> as teaching the following elements of claim 10: "a first associative data memory directly connected to the symbol neuron group of said chaotic associative memory and having a function to temporarily hold a symbol pattern represented by states of neuron signals of said symbol neuron group." See Office Action, page 8. In making this rejection, the Office Action refers to page 2, page 4, lines 1-4, and Figure 2 of <u>CAM</u>.[2] These passages appear to describe a chaotic associative memory neural network. However, <u>CAM</u> fails to describe this chaotic associative memory neural network as being "connected to the symbol neuron group of said chaotic associative memory and having a function to temporarily hold a symbol pattern represented by states of neuron signals of said symbol neuron group," as claimed.

The Office Action concedes that <u>SAMANN</u> also fails to teach or suggest the claimed elements. See Office Action, page 8. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of this claim under 35 U.S.C. § 103(a).

3.   Claims 11-13

The Office Action has failed to establish a *prima facie* case of obviousness for at least the reason that <u>SAMANN</u> and <u>CAM</u> fail to teach or suggest each and every element of claim 11.

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[2] These passages correspond to page 2, page 8, lines 2-5, and Figure 2 of the full translation of <u>CAM</u>, attached in the accompanying Supplemental IDS.

The Office Action describes SAMANN as teaching the following elements of claim 11: "a working memory portion including...a control sequencer generating a state pattern signal for use in defining directivity of association, invalidation of each input information, invalidation of each associative output, or directivity of each symbol signal in accordance with an external object signal and applying the generated signal commonly to said associative memories." See Office Action, page 9. In making this rejection, the Office Action refers to page 1, lines 13-28, page 2, lines 1-26, and Figure 3.1 of SAMANN.[3] The Office Action additionally notes that external signal IselS functions as a control sequencer. See Office Action, page 9.

The passages recited from SAMANN appear to describe how to configure a neuron circuit in an associative memory neural network. SAMANN describes the IselS signal of the neuron circuit as "a select/control signal determining whether to fix the output state of the neuron with the teacher data or to let it take the state attributable to the internal active value." See SAMANN at page 6, lines 12-15. SAMANN also gives examples of how the neuron circuit functions in response to the IselS signal. See Table 3.1 of SAMANN at page 8. These passages fail to explain how the IselS signal operates as: "a control sequencer generating a state pattern signal for use in defining directivity of association, invalidation of each input information, invalidation of each associative output, or directivity of each symbol signal in accordance with an external

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[3] These passages correspond to page 5, line 14, through page 6, and Figure 3.1 of the full translation of SAMANN, attached in the accompanying Supplemental IDS.

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object signal and applying the generated signal commonly to said associative memories," as claimed. Since <u>SAMANN</u> fails to describe how the IselS signal operates in the manner claimed, <u>SAMANN</u> fails to teach or suggest each and every element of claim 11.

<u>CAM</u>, cited merely for its teaching of a chaotic associative memory, fails to cure the deficiencies of <u>SAMANN</u>, as noted above. Therefore, <u>SAMANN</u> and <u>CAM</u>, whether taken alone or in combination, fail to teach or suggest all of the elements of claim 11. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of this claim under 35 U.S.C. § 103(a). Claims 12-13 depend from and add additional features to independent claim 11. Accordingly, these claims are allowable for at least the reasons set forth above.

Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: November 5, 2004   By: /Tim Hudon—Reg. No. 43,592 for:
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